

LOW POWER DIFFERENTIAL-TO-SINGLE ENDED CONVERTER
WITH GOOD DUTY CYCLE PERFORMANCE

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ABSTRACT OF THE DISCLOSURE

A differential-to-single-ended (DSE) converter receives a positive differential input and a negative differential input and generates a single-ended output. The DSE converter comprises: 1) a first comparator having a non-inverting input coupled to the positive differential input and an inverting input coupled to the negative differential input; 2) a second comparator having an inverting input coupled to the positive differential input and a non-inverting input coupled to the negative differential input; 3) a first D flip-flop having a Logic 1 input and clocked by a rising edge on the first comparator output; 4) a second D flip-flop having a Logic 1 input and clocked by a rising edge on the second comparator output; and 5) a latch circuit having a first input coupled to the first D flip-flop output and a second input coupled to the second D flip-flop output. Rising edges on the first and second D flip-flop outputs cause the latch output to change state.